



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor Patent Application: Samuel Reichgott

Application No.: 09/353,583

Filed: July 15, 1999

Title: "Method & Apparatus for Preventing Disruptions in Set-Top Terminal Function due to the Download of Updated Programming or Data to the Set-Top Terminal"

Examiner: TRAN, Hai V.

Group Art Unit: 2611

Conf. No.: 3801

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TRANSMITTAL OF REPLY BRIEF

Sir:

Transmitted herewith in **triplicate** is the Reply Brief with respect to the Examiner's Answer mailed on **March 11, 2004**. This Reply Brief is being filed pursuant to 37 CFR 1.193(b) within two months of the date of the Examiner's Answer.

(Note: Extensions of time are not allowed under 37 CFR 1.136(a))

(Note: Failure to file a Reply Brief will result in dismissal of the Appeal as to the claims made subject to an expressly stated new grounds of rejection.)

No fee is required for filing of this Reply Brief, however, if at any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account 18-0013 pursuant to 37 CFR 1.25. Additionally please charge any fees to Deposit Account 18-0013 under CFR 1.16 through 1.21 inclusive, and any other section in the Title 37 of the Code of Federal Regulations that may regulate fees. A duplicate copy of this sheet is enclosed.

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Date of Deposit: **May 11, 2004**

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Group Art Unit: 2611

Samuel REICHGOTT et al.

Conf. No.: 3801

Serial No.: 09/353,583

Examiner: H. Tran

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For: METHOD & APPARATUS FOR PREVENTING DISRUPTIONS IN SET-TOP  
TERMINAL FUNCTION DUE TO THE DOWNLOAD OF UPDATED  
PROGRAMMING OR DATA TO THE SET-TOP TERMINAL

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REPLY BRIEF

Commissioner of Patents  
P.O. Box 1450  
Arlington, VA

Sir:

This is a Reply Brief under 37 C.F.R. § 1.193(b)(1) in response to the Examiner's Answer of March 11, 2004 (Paper No. 27). Appellant continues to traverse the rejection of the claimed invention in the Office Action of June 5, 2003.

Issues:

In the non-Office Action of June 5, 2003 (Paper No. 23), the following rejections were made:

Claims 1-4, 6-17, 24-27, 30-35 and 41-44 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the combined teachings of U.S. Patent No. 5,440,632 to Bacon et al. ("Bacon") and U.S. Patent No. 5,497,187 to Banker et al. ("Banker").

Claims 5 and 28 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Bacon in view of Banker and U.S. Patent No. 5,373,557 to Diehl et. al. ("Diehl").

Claims 18-19, 21-23, 29, 36, 37, 39 and 40 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Bacon in view of Banker and U.S. Patent No. 5,619,250 to McClellan et al. ("McClellan").

Claims 20 and 38 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Bacon in view of Banker, McClellan and U.S. Patent No. 5,987,210 to Iggulden et al. ("Iggulden").

Claims 45 and 46 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Bacon in view of Banker and U.S. Patent No. 6,141,683 to Kraml et al. ("Kraml").

**Arguments:**

Claim 1 recites:

A set-top terminal for connecting a subscriber to a cable network, said terminal comprising:  
a processor; and  
a memory unit,  
wherein the processor monitors an out-of-band control channel of the cable network for information indicating that a download of data or programming is available and indicating a specified in-band channel for receiving the download of data or programming offered to said set-top terminal over said cable network, wherein said processor only accepts said download on said specified in-band channel and records said download in said memory unit when one or more predetermined criteria are satisfied, and wherein said criteria when satisfied indicates that acceptance of said download will cause a minimum of interference with said subscriber's use of said set-top terminal.

Claims 24 and 43 recite similar subject matter.

Bacon fails to teach or suggest a set-top terminal with a processor that monitors an out-of-band control channel for information indicating that a download of data or programming is available on a specified in-band channel. The Banker reference likewise fails to teach or suggest this feature of the claimed invention.

The Examiner's Answer cites unrelated portions of Bacon and takes the teachings of Bacon out of context in an attempt to unreasonably stretch the teachings of Bacon to approximate claims 1, 24 and 43.

The repeatedly cited, but misunderstood, portion of Bacon is col.8, lines 12-24. This portion of Bacon reads, in pertinent part, "[a] secure microprocessor 136 determines whether the descrambler control 110 of MCC 104 carries out descrambling on a particular channel or what form of descrambling is required at a particular time by interpreting the authorization and control data downloaded from the system manager 12 (by any of the three data transmission schemes discussed herein, out-of-band, in-band audio or in-band video) into the internal NVM memory of the device."

Thus, Bacon teaches that "control data" that governs the *descrambling* of television channels may be transmitted either in-band or out-of-band. Bacon does not teach or suggest that this descrambling control data also governs the downloading of programming used to operate the set-top terminal or specifies a channel for such downloading.

Furthermore, just because Bacon teaches that descrambling control data can be transmitted either in-band or out-of-band, that does not teach or suggest "monitor[ing] an out-of-band control channel ... for information indicating that a download of data or programming is available and indicating a specified in-band channel" as claimed.

The Examiner's Answer also points to Bacon's Fig. 3A, specifically bytes 16-17, which are described at col. 9, lines 66-68. According to the Examiner's Answer, Bacon teaches that these bytes "indicate the frequency of the *in-band* channel that the downloadable program will be transmitted." (Paper No. 27, pp. 18-19) (emphasis added).

This is an overstatement of what Bacon actually teaches. Nowhere does Bacon state that the frequency specified by bytes 16-17 is an "in-band" channel. Further, Bacon does not ever suggest that the message illustrated in Fig. 3A is delivered on an out-of-band channel as claimed.

As noted, Bacon teaches that *descrambling* control data can be transmitted either in-band or out-of-band. Bacon makes no such comment with regard to control data, such as that illustrated in Fig. 3A, that govern the downloading of programming for operating a

set-top terminal. The Examiner's Answer fails to appreciate that different portions of Bacon are teaching about entirely different operations of the set-top terminal.

Like Bacon, Banker teaches a system in which both in- and out-of-band channels are used to transmit data. (Col. 5, lines 27-31). However, like Bacon, Banker nowhere teaches or suggests that a control instruction on an out-of-band channel refers a set-top terminal to programming being downloaded over a specified in-band channel. The Examiner's Answer and previous Actions fail to cite such a teaching in either Bacon or Banker.

In sum, the Examiner's Answer again fails to indicate how or where the cited prior art teaches or suggests a control signal on an out-of-band channel that refers a set-top terminal to programming being downloaded over a specified in-band channel. Appellant can find no such teaching in the cited prior art.

"To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974)." M.P.E.P. § 2143.03. Accord. M.P.E.P. § 706.02(j). Therefore, because the combination of Bacon and Banker fails to teach or suggest all the features of claims 1-4, 6-17, 24-27, 30-35 and 41-44, the rejection of those claims should not be sustained.

Additionally, claim 7 recites that "said one or more criteria include a deadline by which acceptance of said download is required by an operator of said cable network, said deadline being a specific point in time subsequent to an initial offering of said download of data or programming." (emphasis added). Claim 43 recites similar subject matter.

In response, the Examiner's Answer indicates that Bacon teaches a subscriber convenience flag that, if set, will cause a message to be displayed to the subscriber indicating that "'New software is available' and requesting 'is it OK to update the software... .' ... The control processor 128 will then wait for the subscriber key input to block A86, or after a timeout period, will accept the lack of a key input as an affirmative response... ." (Col. 16, lines 20-42). If the subscriber responds negatively to the convenience flag, the download is not accepted, *indefinitely*. (Col. 16, lines 30-36).

This *not* a teaching of the claimed “deadline by which acceptance of said download is required.” In particular, the “timeout period” taught by Bacon is merely a way of assuming subscriber convenience to accept a download. The “timeout period” and the download can still be dismissed by the subscriber’s negative response. Thus, the “timeout period” is *not* “a deadline by which acceptance of said download is required by an operator of said cable network” as claimed.

"To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974)." M.P.E.P. § 2143.03. Accord. M.P.E.P. § 706.02(j). Because Bacon and Banker fail to teach or suggest the claimed “deadline by which acceptance of said download is required,” the rejection of claims 7, 8, 43 and 44 should not be sustained.

Claim 18 recites:

A set-top terminal for connecting a subscriber to a cable network, said terminal comprising:  
a processor; and  
a memory unit,  
wherein the processor monitors the cable network for information indicating that a download is available and indicating a specified channel for receiving the offered download, wherein said terminal occasionally receives said download over said cable network of new programming on said specified channel; and  
wherein following said download of programming, said processor will only execute said new programming from said download when one or more predetermined criteria are satisfied that indicate executing said new programming will not inconvenience said subscriber.

It is important to note that the subject matter of claim 18 does not deal with the timing of a download of new programming for operating a set-top terminal as do the claims discussed above. Rather, claim 18 deals with the timing at which newly-downloaded programming is executed by the receiving set-top terminal in favor of the programming that was previously running on that set-top terminal.

Bacon and Banker fail to teach or suggest that, following a download of programming, execution of the new programming does not occur until “one or more

predetermined criteria are satisfied that indicate executing said new programming will not inconvenience [the] subscriber.” The Examiner’s Answer appears to agree, stating “Bacon and Banker do not clearly disclose ‘the processor will only execute the new programming when one or more predetermined criteria are satisfied . . .’.” (Paper No. 27, p. 12). Appellant takes this to mean that the Examiner, like the Appellant, cannot find or cite a teaching or suggestion in Bacon or Banker of only executing downloaded programming when one or more predetermined criteria are satisfied as claimed.

Consequently, the Examiner’s Answer cites McClellan in combination with Bacon and Banker. McClellan, however, teaches that downloaded programming is immediately implemented irrespective of any predetermined criteria. According to McClellan, “[t]he new modules are then downloaded, along with a corresponding description record...”. The operating system places the new description records in the configuration description block. With the description records in the configuration description block, the new modules are fully functional.” (col. 7, lines 23-35).<sup>1</sup> Thus, McClellan does not teach or suggest using any criteria that indicate whether a user will be inconvenienced by the implementation of the new programming.

The Examiner’s Answer argues that “McClellan discloses the processor will only execute new programming when one or more predetermined criteria are satisfied (new module are fully functional) that indicate execute the new programming will not inconvenience the subscriber (execute the new module without restarting the system).” (Paper No. 27, p. 12) (citations and emphasis omitted). This is clearly incorrect. McClellan does not mention any predetermined criteria that are considered before new programming is executed. When received, the new programming is executed, period.

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<sup>1</sup> This portion of McClellan, in its entirety, reads as follows:

When an operating system is found to be insufficient, a request is sent from the decoder system (10) to the interactive television network for the new module or modules. The new modules are then downloaded, along with a corresponding description record, from the interactive television system to the set top box decoding system (10). The operating system places the new description records in the configuration description block. With the description records in the configuration description block, the new modules are fully functional and there is no need to restart the system or perform any form of system reconfiguration. The entire upgrade procedure is performed by the set top box decoder system (10) without the need for interaction from the user.

The statement of the Examiner's Answer seems to say that the criteria satisfied is that the "new module [is] fully functional." This is tantamount to saying that the new module is not executed until it is executed. While true, this is not a teaching or suggestion of only executing new programming when predetermined criteria are satisfied as claimed. Moreover, just because the system is not restarted, that does not mean that there is no interruption of service or functionality or inconvenience to the subscriber as the new programming is executed.

McClellan simply does not teach or suggest that implementation of new programming only occurs upon the satisfaction of one or more predetermined criteria indicating that a subscriber will not be inconvenienced. Consequently, the combination of Bacon, Banker and McClellan does not teach or suggest the features of claim 18.

"To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974)." M.P.E.P. § 2143.03. Accord. M.P.E.P. § 706.02(j). For at least this reason, the rejection of claims 18-23 should not be sustained.

Similarly, claim 36 recites:

A method for implementing upgraded programming received in a set-top terminal for connecting a subscriber to a cable network, said method comprising the steps of:  
receiving a signal from a headend identifying a specified in-band channel on which a download of upgraded programming is offered, wherein the received signal is obtained via an out-of-band control channel of the cable network; and  
terminating execution of existing programming and commencing execution of said upgraded programming only when one or more predetermined criteria are satisfied.

As noted above, Bacon and McClellan expressly teach executing new programming immediately after downloading is complete and do not teach or suggest "commencing execution of said upgraded programming only when one or more predetermined criteria are satisfied."

It should be noted that McClellan does not teach or suggest checking to make sure that a module is complete or error-free before rendering the module "fully functional." McClellan merely states that the module is made "fully functional" by placing "the new description records [for the modules] in the configuration description block. With the



description records in the configuration description block, the new modules are fully functional.” (col. 7, lines 23-35).

There is no criteria taught for deciding whether the description records are recorded in the configuration description block. It happens automatically. Attempting to imply that there is some criteria taught by McClellan before the description records are recorded in the configuration description block and the modules are rendered “fully functional” is to overstate what McClellan actually teaches, reading subject matter into McClellan that is not there.

Consequently, the rejection of claims 36-40 should also not be sustained.

Claim 41 recites:

A set-top terminal for connecting a subscriber to a cable network, said terminal comprising:  
a processor unit comprising a first processor and a second processor; and  
a memory unit;  
wherein said first processor is dedicated to providing a user interface and said second processor is dedicated to monitoring an out-of-band channel for information indicating that a download of data or programming is available, indicating a specified in-band channel for receiving the download, and managing a download of data or programming offered to said set-top terminal over said cable network through the specified in-band channel such that said first processor can maintain said user interface including user services while said second processor manages the download.

(emphasis added).

Thus, claim 41 recites a first processor for providing a user interface and a second processor for managing the download of data or programming. Appellant previously pointed out that relevant prior art, if cited, would not simply show two processors, but two processors performing the respective tasks as recited in claim 41. There has been no such prior art of record.

In response, the Examiner’s Answer improperly attempts to cite a new reference, U.S. Patent No., 4,636,942 to Chen et al. A new reference cannot be cited in an Examiner’s Answer. 37 C.F.R. § 1.193(2) makes clear that: “An examiner’s answer must not include a new ground of rejection.”

The Examiner has already reopened prosecution on these claims once before after receiving Appellant's first Appeal Brief. The Examiner cannot now cite another reference or make a new ground of rejection as to claim 41.

Moreover, even if the Chen reference could be added at this point, Chen merely teaches that multiple processors can be used in a system to perform independent tasks. Chen does not teach or suggest a "first processor" "dedicated to providing a user interface" and a "second processor" "dedicated to monitoring an out-of-band channel for information indicating that a download of data or programming is available."

None of the prior art references of record taken alone or in combination teaches or suggests these features of claim 41. Therefore, the rejection of claim 41 should not be sustained.

Claims 5 and 28 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Bacon in view of U.S. Patent No. 5,373,557 to Diehl et. al. ("Diehl"). Claim 5 recites that "said one or more criteria [for accepting a download] include a time of day." Claim 28 recites similar subject matter.

As acknowledged by the Office Action, Bacon and Banker fail to teach or suggest using "time of day" as a criterion for accepting a download of new data or programming. (Paper No. 23, p. 9). Adding Diehl does not remedy this deficiency.

Diehl only teaches a system that activates a decoder during a specified time of day to receive entitlements (Col. 1, lines 55-60). Diehl routinely activates the decoder at a specified time of day on a regular basis. Diehl does not teach or suggest using time of day as a criterion to be considered in deciding whether to take a particular action, such as accept a data download as claimed.

Neither Bacon, Banker nor Diehl teach or suggest using time of day as a criterion indicative of subscriber convenience for deciding whether to accept a download of programming for operating a set-top terminal. The Examiner's Answer notes that Appellant cannot show non-obviousness by attacking references individually. (Paper No. 27, p. 24). Similarly, obviousness cannot be shown by citing a combination of references, none of which teach a particular feature of the claimed invention.

Consequently, the combined teachings of Bacon, Banker and Diehl fail to teach or suggest all the features of claims 5 and 28. "To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974)." M.P.E.P. § 2143.03. Accord. M.P.E.P. § 706.02(j).

Moreover, the Examiner's Answer fails to make the required showing of motivation explained in the prior art that would have lead one of skill in the art to combine the teachings of Diehl with those of Bacon and Banker to approximate the claimed invention. Consequently, no *prima facie* case of obviousness has been made. Therefore, the rejection of 5 and 28 should not be sustained.

Claims 20 and 38 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Bacon in view of Banker, McClellan and Iggulden. Claim 20 recites that "the one or more criteria [for accepting a download] include detection of a commercial break in television programming being received by said set-top terminal." Claim 38 recites similar subject matter.

As acknowledged by the Office Action, Bacon, Banker and McClellan fail to teach or suggest using detection of a commercial break as a criterion for accepting a download of new data or programming. (Paper No. 23, p. 12). Adding Iggulden to the mix does not remedy this deficiency because Iggulden only teaches a video system that can detect commercial messages and eliminated them from a video recording. Iggulden fails to teach or suggest accepting new programming based, in part, on the detection of a commercial break.

Consequently, the combined teachings of Bacon, Banker, McClellan and Iggulden fail to teach or suggest all the features of claims 20 and 38. "To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974)." M.P.E.P. § 2143.03. Accord. M.P.E.P. § 706.02(j).

Moreover, the Examiner's Answer fails to make the required showing of motivation explained in the prior art that would have lead one of skill in the art to

combine the teachings of Iggulden with those of Bacon, Banker and McClellan to approximate the claimed invention. Consequently, no *prima facie* case of obviousness has been made. Therefore, the rejection of claims 20 and 38 should not be sustained.

Claims 45 and 46 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Bacon in view of Banker and Kraml.

Claim 45 recites:

A method of operating a set-top terminal for connecting a subscriber to a cable network, wherein said set-top terminal comprises a processor and a memory unit, said memory unit storing programming that is executed by said processor during operation of said set-top terminal, wherein said memory unit further comprises at least two versions of said programming, a newer version and an older version, said method comprising:

executing said newer version of said programming upon start-up of said set-top terminal;

receiving a command via said cable network to switch versions of said programming; and

terminating execution of said newer version of said programming and beginning execution of said older version of said programming in response to receipt of said command.

Bacon and Banker fail to teach or suggest a method in which a system controller can send a command to terminate execution of one programming version and initiate execution of another version by a networked device. (Paper No. 23, p. 13). Adding the teachings of Kraml does not remedy this deficiency.

Kraml does not teach or suggest a method in which a system controller can send a command to terminate execution of one programming version and initiate execution of another version by a networked device. Kraml only teaches switching programming versions when a previous version has failed an initial integrity check during boot or has "crashed." (Col. 6, line 47-col. 7, line 43).

The Examiner's Answer overlooks the fact that the system taught by Kraml does not ever send a command that results in "terminating execution of said newer version of said programming." Kraml only teaches generating commands to execute other programming in response to executing programming having crashed.



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